### *In This Section*

- Identified Basin Planning and Management Concerns
- Priorities for Water Quality Concerns
- Priorities for Water Quantity Concerns

*Section 6*

# Concerns and Priority Issues

The assessments in Section 5 present a number of water quality and quantity concerns within the Coosa River basin. This section aggregates the assessment data to identify priority issues for development of management strategies.

## 6.1 Identified Basin Planning and Management Concerns

Sections 4 and 5 identified both site-specific and generalized sources of water quality stressors. Some issues are limited to specific segments, but a number of water quality concerns apply throughout the basin. The criterion listed most frequently in the assessment report *Water Quality in Georgia, 1996-1997* as a contributor to nonsupporting or partially supporting status was fecal coliform bacteria (399 out of 1,254 miles, or 32 percent of the stream miles which were assessed within the basin), followed by metals such as zinc, copper and lead (168 out of 1,254 miles, or 13 percent of assessed stream miles, including waters with violations of standards for both fecal coliform bacteria and metals). Both fecal coliform and metals violations are most often attributed to "urban runoff" as a primary source or one among several sources (195 miles for fecal coliforms, 90 miles for metals), followed by nonpoint sources (125 miles for fecal coliforms, 60 miles for metals). Within some individual stream reaches, other sources may be of greater importance (e.g., WPCP effluent); however, urban runoff and general nonpoint sources represent a basin-wide concern. Further, strong population growth and development pressure in parts of the basin will tend to increase the importance of urban runoff as a stressor of concern. For such widespread concerns, basin-wide management strategies will be needed.

Major water quality and quantity concerns for the Coosa River basin are summarized by geographic area in terms of the concerns and sources of these concerns in Table 6-1. Table 6-2 summarizes the pollutants identified as causing impairment of designated uses in the basin; however, not all identified concerns are related to pollutant loads. Ongoing control strategies are expected to result in support of designated uses in a number of waters. In other waters, however, the development of additional management strategies may be required or implemented in order to achieve water quality standards.

**Table 6-I. Summary of Concerns in the Coosa River Basin**

| | Source of the Stressor by HUC | | | | |
|---|---|---|---|---|---|
| **Stressors of Concern** | **Conasauga River HUC 03150101** | **Coosawattee River HUC 03150102** | **Oostanaula River HUC 03150103** | **Etowah River HUC 03150104** | **Coosa below Rome and Chattooga River HUC 03150105** |
| Metals | Urban and rural NPS<br>WPCP effluent | | Urban and rural NPS<br>WPCP effluent | Urban and rural NPS | Urban and rural NPS<br>WPCP effluent |
| Fecal Coliform Bacteria | Urban and rural NPS | Urban and rural NPS | Urban and rural NPS | Urban and rural NPS | Urban and rural NPS |
| Erosion and Sedimentation | Urban and rural NPS | Urban and rural NPS | Urban and rural NPS | Urban and rural NPS | Urban and rural NPS |
| Dissolved Oxygen | | | | Dam discharge | |
| Nutrients | | point and nonpoint phosphorus load | | point and nonpoint phosphorus load | point and nonpoint phosphorus load |
| Fish Consumption Guidelines | nonpoint mercury | nonpoint mercury | PCBs in sediment | PCBs in sediment, nonpoint mercury | PCBs in sediment |
| Water Temperature | Impervious surface and loss of riparian canopy cover | Impervious surface and loss of riparian canopy cover | Impervious surface and loss of riparian canopy cover | Impervious surface and loss of riparian canopy cover | Impervious surface and loss of riparian canopy cover |
| Water Quantity | Future needs<br>- Sufficient flow to ensure water quality below Dalton<br>- Competing demand | Competing demand | | Competing demand | Sufficient flow to ensure water quality below Rome |
| Threatened and Endangered Species | Listed species | Listed species | Listed species | Listed species | Listed species |
| Flooding | | | Floodplain management | Floodplain management | Floodplain management |
| Source Water Protection | Surface water sources in need of protection | Surface water sources in need of protection | Surface water sources in need of protection | Surface water sources in need of protection | Surface water sources in need of protection |

**Table 6-2. Summary of Pollutants Causing Water Quality Impairment in the Coosa River Basin**

| | Geographic Area | | | | |
|---|---|---|---|---|---|
| **Use Classification of Waterbody Segments** | **Conasauga River HUC 03150101** | **Coosawattee River HUC 03150102** | **Oostanaula River HUC 03150103** | **Etowah River HUC 03150104** | **Coosa below Rome and Chattooga River HUC 03150105** |
| Fishing (Support for Aquatic Life) | Metals, pH, toxicity | | Metals, toxicity | Metals, DO | Metals, chlordane |
| Fishing (Fish Consumption) | Mercury | Mercury | PCBs | PCBs, mercury | PCBs |
| Fishing (Secondary Contact Recreation) | Fecal coliform bacteria | Fecal coliform bacteria | Fecal coliform bacteria, mercury | Fecal coliform bacteria | Fecal coliform bacteria |
| Drinking Water | Fecal coliform bacteria | | Fecal coliform bacteria | Fecal coliform bacteria, metals | |
| Wild and Scenic | Metals | | | | |

In the following pages, priority water quality and quantity concerns are presented by Hydrologic Unit. For some water quality and quantity concerns, problem statements are identical for each HUC, others differ between HUCs. Detailed strategies for addressing these concerns are then supplied in Section 7.

Each concern is listed in the form of a "Problem Statement" which summarizes the linkage between stressor sources and water quality impacts. The order in which concerns are listed for each HUC should not be considered to be significant. Prioritization of basin concerns requires consensus among all stakeholders, and has not been finalized; however, short-term water quality action priorities for EPD are summarized in Section 6.2. Priorities for addressing water quantity issues within the Coosa basin are being addressed as part of the ACT/ACF study, and are summarized in Section 6.3.

## 6.1.1 Problem Statements


### Conasauga River Basin (HUC 03150101)

*Metals*

The water use classification of fishing or wild/scenic was not fully supported in one Conasauga River mainstem segment and in seven tributary stream segments due to exceedences of the water quality standards for metals. Lead standards were exceeded in the river due to a water pollution control plant discharge; zinc, copper and/or cadmium were exceeded in tributary stream segments due primarily to nonpoint sources in six segments and to a water pollution control plant discharge in one segment.

*Fecal Coliform Bacteria*

The water use classification of fishing or drinking water was not fully supported in two Conasauga River mainstem segments and two tributary stream segments due to exceedences of the water quality standard for fecal coliform bacteria. These may be attributed to a combination of urban runoff, septic systems, sanitary sewer overflows, rural nonpoint sources and/or animal wastes.

*Erosion and Sedimentation*

The water use classifications of fishing, recreation, and drinking water are potentially threatened in waterbodies by erosion and loading of sediment which can alter stream morphology, impact habitat, and reduce water clarity. Potential sources include urban runoff and development (particularly construction), unpaved rural roads, stream erosion (including headcutting, bank erosion, and shifting of the bedload), forestry practices, and agriculture. There are no stream segments listed at this time in this sub-basin as not fully supporting designated water uses due to poor fish communities or sedimentation.

*Fish Consumption Guidelines*

The water use classification of fishing was not fully supported in one tributary stream segment (Swamp Creek) based on fish consumption guidelines due to mercury. The guidelines are for redeye bass.

*Thermal Regime in Trout Streams*

Development that results in increased impervious surface area, impoundments on tributaries, and loss of riparian canopies within the Conasauga Basin is adversely affecting trout stream thermal regimes.

*Protection of Threatened and Endangered Species*

The Coosa basin is home to a number of aquatic species which have been listed as threatened or endangered and require protection.

*Water Quantity Demand*

Sufficient water quantity to meet the competing demands for drinking water, minimum instream flow rate and other environmental releases, hydropower, and recreation uses may not be available within portions of the Coosa River Basin. There is concern over meeting future needs in the Dalton area (HUC 03150101).

*Source Water Protection for Drinking Water Sources*

Many public water supplies have no control over their source watersheds and have to spend additional treatment dollars to insure a high quality water supply. All streams with municipal water intakes need to have watershed assessments and protection plans developed, and implemented.


## Coosawattee River Basin (HUC 03150102)

*Fecal Coliform Bacteria*

The water use classification of fishing was not fully supported in one Coosawattee River mainstem segment and eight tributary stream segments due to exceedences of the water quality standard for fecal coliform bacteria. Four are attributed to urban nonpoint sources and five to rural nonpoint sources. Excursions of fecal coliform bacteria standards result from a combination of urban runoff, septic systems, sanitary sewer overflows, rural nonpoint sources and/or animal wastes.

*Erosion and Sedimentation*

The water use classifications of fishing, recreation, and drinking water are potentially threatened in waterbodies by erosion and loading of sediment which can alter stream morphology, impact habitat, and reduce water clarity. Potential sources include urban runoff and development (particularly construction), unpaved rural roads, stream erosion (including headcutting, bank erosion, and shifting of the bedload), forestry practices, and agriculture. There are no stream segments listed at this time in this sub-basin as not fully supporting designated water uses due to poor fish communities or sedimentation.

*Fish Consumption Guidelines*

The water use classification of fishing was not fully supported in one tributary segment (Talking Rock Creek) and in Carters Lake based on fish consumption guidelines due to mercury. The guidelines are for redeye bass in the tributary and walleye in the lake.

*Nutrients*

The water use classifications of fishing and recreation are potentially threatened in Carters Lake due to inputs of nutrients which may cause excess algal growth in the lake. Nutrient sources include water pollution control plant discharges and nonpoint sources from urban and agricultural areas.

*Thermal Regime in Trout Streams*

Development that results in increased impervious surface area, impoundments on tributaries, and loss of riparian canopies within the Coosawattee Basin is adversely affecting trout stream thermal regimes.

*Protection of Threatened and Endangered Species*

The Coosa basin is home to a number of aquatic species which have been listed as threatened or endangered and require protection.

*Water Quantity Demand*

Sufficient water quantity to meet the competing demands for drinking water, minimum instream flow rate and other environmental releases, hydropower, and recreation uses may not be available within the Carters Lake (HUC 03150102) portion of the Coosa River Basin.

*Source Water Protection for Drinking Water Sources*

Many public water supplies have no control over their source watersheds and have to spend additional treatment dollars to insure a high quality water supply. All streams with municipal water intakes need to have watershed assessments and protection plans developed, and implemented.


## Oostanaula River Basin (HUC 03150103)

*Metals*

The water use classification of fishing was not fully supported in four tributary stream segments due to exceedences of the water quality standards for metals. Lead, copper and/or mercury standards were exceeded in the tributary stream segments due to nonpoint sources in two segments and to a water pollution control plant discharge in two segments.

*Fecal Coliform Bacteria*

The water use classification of fishing or drinking water was not fully supported in two Oostanaula River mainstem segments and two tributary stream segments due to exceedences of the water quality standard for fecal coliform bacteria. These may be attributed to a combination of urban runoff, septic systems, sanitary sewer overflows, rural nonpoint sources and/or animal wastes.

*Erosion and Sedimentation*

The water use classifications of fishing, recreation, and drinking water are potentially threatened in waterbodies by erosion and loading of sediment which can alter stream morphology, impact habitat, and reduce water clarity. Potential sources include urban runoff and development (particularly construction), unpaved rural roads, stream erosion (including headcutting, bank erosion, and shifting of the bedload), forestry practices, and agriculture. There are no stream segments listed at this time in this sub-basin as not fully supporting designated water uses due to poor fish communities or sedimentation.

*Fish Consumption Guidelines*

The water use classification of fishing was not fully supported in the Oostanaula River mainstream based on fish consumption guidelines due to PCBs. The guidelines are for largemouth bass, smallmouth buffalo and channel catfish.

*Thermal Regime in Trout Streams*

Development that results in increased impervious surface area, impoundments on tributaries, and loss of riparian canopies within the Oostanaula Basin is adversely affecting trout stream thermal regimes.

*Protection of Threatened and Endangered Species*

The Coosa basin is home to a number of aquatic species which have been listed as threatened or endangered and require protection.

*Source Water Protection for Drinking Water Sources*

Many public water supplies have no control over their source watersheds and have to spend additional treatment dollars to insure a high quality water supply. All streams with

municipal water intakes need to have watershed assessments and protection plans developed, and implemented.

*Flooding and Floodplain Management*

Flooding in the Rome area (HUCs 03150103, 03150104, and 03150105) continues to be a major factor associated with property loss in the basin.

## Etowah River Basin (HUC 03150104)


*Metals*

The water use classification of fishing was not fully supported in one Etowah River mainstem segment and in nine tributary stream segments due to exceedences of the water quality standards for metals. Copper standards were exceeded in the river due to nonpoint sources; copper, lead, zinc, and/or cadmium were exceeded in tributary stream segments due primarily to urban runoff.

*Fecal Coliform Bacteria*

The water use classification of fishing was not fully supported in three Etowah River mainstem segments and 22 tributary stream segments due to exceedences of the water quality standard for fecal coliform bacteria. These may be attributed to a combination of urban runoff, septic systems, sanitary sewer overflows, rural nonpoint sources and/or animal wastes.

*Erosion and Sedimentation*

The water use classifications of fishing, recreation, and drinking water are potentially threatened in waterbodies by erosion and loading of sediment which can alter stream morphology, impact habitat, and reduce water clarity. Potential sources include urban runoff and development (particularly construction), unpaved rural roads, stream erosion (including headcutting, bank erosion, and shifting of the bedload), forestry practices, and agriculture. There are no stream segments listed at this time in this sub-basin as not fully supporting designated water uses due to poor fish communities or sedimentation.

*Fish Consumption Guidelines*

The water use classification of fishing was not fully supported in the Etowah River mainstream above and below Lake Allatoona or in Lake Allatoona based on fish consumption guidelines due to PCBs and mercury in the river segment and PCBs in the lake. The guidelines are for largemouth bass, spotted bass, and smallmouth buffalo in the river and carp, white bass, and largemouth bass in the lake.

*Nutrients*

The water use classifications of fishing, drinking water, and recreation are potentially threatened in Lake Allatoona due to inputs of nutrients which may cause excess algal growth in the lake. Nutrient sources include water pollution control plant discharges and nonpoint sources from urban and agricultural areas.

*Low Dissolved Oxygen*

The fishing water use classification was not fully supported in the Etowah River between Lake Allatoona and Richland Creek due to dissolved oxygen concentrations less than standards.

*Thermal Regime in Trout Streams*

Development that results in increased impervious surface area, impoundments on tributaries, and loss of riparian canopies within the Etowah Basin is adversely affecting trout stream thermal regimes.

*Protection of Threatened and Endangered Species*

The Coosa basin is home to a number of aquatic species which have been listed as threatened or endangered and require protection.

*Water Quantity Demand*

Sufficient water quantity to meet the competing demands for drinking water, minimum instream flow rate and other environmental releases, hydropower, and recreation uses may not be available within the Lake Allatoona portion of the Coosa River Basin.

*Source Water Protection for Drinking Water Sources*

Many public water supplies have no control over their source watersheds and have to spend additional treatment dollars to insure a high quality water supply. All streams with municipal water intakes need to have watershed assessments and protection plans developed, and implemented.

*Flooding and Floodplain Management*

Flooding in the Rome area (HUCs 03150103, 03150104, and 03150105) continues to be a major factor associated with property loss in the basin.


## Coosa River below Rome and the Chattooga River Basin (HUC 03150105)

*Metals*

The water use classification of fishing was not fully supported in one Coosa River mainstem segment and in one Chattooga River mainstem segment due to exceedences of the water quality standards for metals. Lead standards were exceeded in the Coosa River due to urban runoff; copper and lead were exceeded in the Chattooga River due to a water pollution control plant discharge.

*Fecal Coliform Bacteria*

The water use classification of fishing was not fully supported in two Coosa River mainstem segments, two Chattooga River mainstem segments and in four tributary stream segments due to exceedences of the water quality standard for fecal coliform bacteria. These may be attributed to a combination of urban runoff, septic systems, sanitary sewer overflows, rural nonpoint sources and/or animal wastes.

*Erosion and Sedimentation*

The water use classifications of fishing, recreation, and drinking water are potentially threatened in waterbodies by erosion and loading of sediment which can alter stream morphology, impact habitat, and reduce water clarity. Potential sources include urban runoff and development (particularly construction), unpaved rural roads, stream erosion (including headcutting, bank erosion, and shifting of the bedload), forestry practices, and agriculture. There are no stream segments listed at this time in this sub-basin as not fully supporting designated water uses due to poor fish communities or sedimentation.

*Fish Consumption Guidelines*

The water use classification of fishing was not fully supported in the Coosa River mainstem based on fish consumption guidelines due to PCBs. The guidelines are for largemouth bass, smallmouth buffalo, black crappie, striped bass, and channel catfish.

*Nutrients*

The water use classifications for fishing, drinking water, and recreation are potentially threatened in Lake Weiss in Alabama due to inputs of nutrients which may

cause excess algal growth in the lake. Nutrient sources include water pollution control plant discharges and nonpoint sources from urban and agricultural areas.

*Thermal Regime in Trout Streams*

Development that results in increased impervious surface area, impoundments on tributaries, and loss of riparian canopies within the Coosa basin is adversely affecting trout stream thermal regimes.

*Protection of Threatened and Endangered Species*

The Coosa basin is home to a number of aquatic species which have been listed as threatened or endangered and require protection.

*Water Quantity Demand*

Sufficient water quantity to meet the competing demands for drinking water, minimum instream flow rate and other environmental releases, hydropower, and recreation uses may not be available within all portions of the Coosa River basin. There is concern about sufficient quantity of water below Rome (HUC 03150105) to assure water quality in the Coosa River and in Lake Weiss.

*Source Water Protection for Drinking Water Sources*

Many public water supplies have no control over their source watersheds and have to spend additional treatment dollars to insure a high quality water supply. All streams with municipal water intakes need to have watershed assessments and protection plans developed, and implemented.

*Flooding and Floodplain Management*

Flooding in the Rome area (HUCs 03150103, 03150104, and 03150105) continues to be a major factor associated with property loss in the basin.

## 6.2 Priorities for Water Quality Concerns

### 6.2.1 Short-Term Water Quality Action Priorities for EPD

Section 6.1 identifies known priority concerns for which management and planning are needed in the Coosa River basin. Because of limited resources, and, in some cases, limitations to technical knowledge, not all of these concerns can be addressed at the same level of detail within the current 5-year cycle of basin management. It is therefore necessary to assign action priorities for the short term based on where the greatest return for available effort can be expected.

Current priorities for action by EPD (1998) are summarized in Table 6-3 and discussed below. These reflect EPD's assessment of where the greatest short-term return

**Table 6-3. EPD's Short-Term Priorities for Addressing Waters Not Fully Supporting Use**

| Priority | Type |
|---|---|
| 1 | Segments where ongoing pollution control strategies are expected to result in achieving support of designated uses; active special projects. |
| 2 | Segments with multiple data points which showed metals in excess of water quality standards and segments in which dissolved oxygen is an issue. |
| 3 | Waters for which urban runoff and generalized nonpoint sources have resulted in violations of standards for metals or fecal coliform bacteria. |

can be obtained from available resources. These priorities were presented to and discussed with the local advisory committee in February 1998. In addition, the priorities were presented to the public in a stakeholder meeting in Dalton and Rome in February 1998. The priorities were also public noticed and approved by the USEPA as part of the Georgia CWA 303(d) listing process in 1998 and discussed in the report, *Water Quality in Georgia, 1996-1997*.

### Assigning Priorities for Stream Segments

For many waters in the Coosa River basin, currently planned control strategies are expected to result in attainment of designated uses. The majority of EPD resources will be directed to ensure that the ongoing pollution control strategies are implemented as planned and water quality improvements are achieved. These waters (see Appendix E) are identified as active 305(b) waters, and are the highest priority waters, as these segments will continue to require resources to complete actions and ensure standards are achieved. These stream segments have been assigned priority one.

Second priority was allocated to segments with multiple data points which showed metals concentrations from nonpoint sources in excess of water quality standards and to segments in which dissolved oxygen concentration was an issue.

Third priority was assigned to waters where urban runoff and general nonpoint sources caused metal or fecal coliform bacteria standards violations. Waters added to the Georgia 303(d) list by EPA were also assigned to third priority. Within the current round of basin planning these sources will be addressed primarily through general strategies of encouraging best management practices for control of stressor loadings.

Several issues helped forge the rationale for priorities. First, strategies are currently in place to address the significant water quality problems in the Coosa River basin and significant resources will be required to ensure that these actions are completed. Second, the vast majority of waters for which no control strategy is currently in place are listed as impaired as a result of exceedance of criteria for metals or fecal coliform bacteria due to urban runoff or nonpoint sources. At the present time, the viability of the standards for metals and the efficacy of the fecal coliform bacteria standard are in question in the scientific community, as described in Section 4.2. Also, in many cases, the metals database was minimal with as few as one data point showing a concentration in excess of standards placing a stream reach or area of a lake on the partial support lists.

## 6.2.2 General Long-Term Priorities for Water Quality Concerns

Long-term priorities for water quality management in the Coosa River basin will need to be developed by EPD and all other stakeholders during the next iteration of the basin management cycle. Long-term priorities must seek a balance between a number of different basinwide objectives. These objectives include:

- Protecting water quality in lakes, rivers and streams through attainment of water quality standards and support for designated uses;
- Providing adequate, high quality water supply for municipal, agricultural, industrial, and other human activities;
- Preserving habitat suitable for the support of healthy aquatic and riparian ecosystems;
- Protecting human health and welfare through prevention of water-borne disease; minimization of risk from contaminated fish tissue, and reduction of risks from flooding; and

- Ensuring opportunities for economic growth, development, and recreation in the region.

## 6.3 Priorities for Water Quantity Concerns

Section 5 also identified a number of concerns for water quantity in the Coosa basin, including existing problems with minimum instream flows and potential future problems for competing demands on water quantity.

### 6.3.1 Priorities for Competing Demands

With regard to the priority to be placed on meeting competing demands for future water use, the EPD (in conjunction with a broad group of stakeholders from north, central, and southwest Georgia) has established a set of "guiding principles" which will be followed in developing the state's position regarding the allocation of water among the states of Alabama, Florida, and Georgia. These principles are partially based upon the prioritization given to meeting categories of water needs under Georgia law (i.e., municipal needs are the first priority, and agricultural water needs are second; all other water needs follow these two). The principles are summarized below:

1. Municipal (M&I) demands have the highest priority.
2. Agriculture needs must be satisfied.
3. Minimum instream flow rates must be met in order to preserve water quality.
4. If other demands (e.g., industrial, recreation, hydropower, navigation, and environment) can not be met under conditions of water shortage, efforts will be made to optimize the mix of economic and environmental values.

While these "guiding principles" were specifically developed to give expression to Georgia's water needs priorities in those areas of Georgia within the study area of the Alabama-Coosa-Tallapoosa/Appalachicola-Chattahoochee-Flint (ACT/ACF) Comprehensive Study, it is likely that they characterize water needs priorities throughout the state. Thus, Georgia places highest value on the use of water for its citizens to use in drinking and water for agricultural needs. It is also extremely important to address needs for sufficient instream flows to maintain acceptable quality of aquatic habitat.

The ACT Interstate Compact, which has been drafted by the states and federal government, does not give the Compact Commission the authority to determine how Georgia must allocate its share of available water among competing uses. That decision, and the mechanism to implement that allocation, is left to EPD. Of course, the larger Georgia's share of the available water resource in these basins, the less often any single demand will go unmet.

### 6.3.2 Regional Water Supply Options

In managing Georgia's surface waters, EPD's approach is to meet as many of the identified water needs to the highest extent practicable, while minimizing adverse impacts associated with meeting those needs. Of foremost importance in meeting those needs is maximizing use of already developed water resources along with aggressive water conservation.

Expected population growth in the Coosa basin over the next several decades is likely to result in exhaustion of the water supplies available from already developed sources,

(even with the employment of very aggressive water conservation measures) if the manner in which the sources are currently operated is not modified. New sources will have to be identified and developed. As the population of county and sub-county political jurisdictions in the Coosa River basin continues to expand, the need for water resources is likely to grow beyond the capability of single political jurisdictions to meet demand from the water resources within their political boundaries. Currently available regional sources in the Coosa basin will also likely be found to have real limits in providing the water resources to meet portions of the expected increases in water demand. Economic growth may be limited by the capabilities of existing local and regional water resources. An alternative strategy is to form cooperative efforts among adjoining political jurisdictions to plan and construct larger water resources projects. This type of approach would minimize the number of smaller water resources projects, and encourage development of new regional water resources in a more cost-effective and environmentally sensitive manner. Such an approach will require much more inter-jurisdictional cooperation on water supply issues than has been evident to date. Failure to pursue such increased cooperation might very well result in unacceptable water supply based restrictions on regional growth.